
[illegible]

C. Plate Assay of heatshocked [REDACTED]

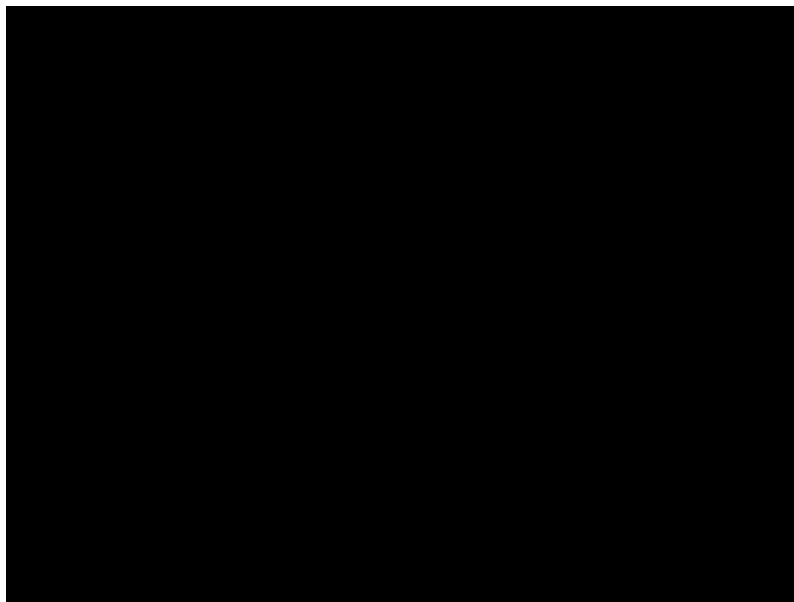


Figure 1. Viability of [REDACTED] after [REDACTED] heat treatment A. [REDACTED] was grown in a 250mL culture flask at [REDACTED] fermentation period [REDACTED] source. Samples collected in 24 hours intervals were counted and plated onto [REDACTED] to obtain total viable cell counts. B. [REDACTED] was grown in a 250mL culture flask at [REDACTED] fermentation period. Samples collected in 24 hours intervals were counted and heat treated for [REDACTED] minutes the diluted and plated onto [REDACTED] A 7-8 log reduction in viability was observed for [REDACTED] after heat treatment as evidenced by the zero growth of colonies. C. Plate assay demonstrating absence of viable [REDACTED] after [REDACTED] heatshock treatment [REDACTED] for both seed [REDACTED] f [REDACTED] Four separate plate media [REDACTED] were used and all showed zero viability of [REDACTED] after heat treatment.

Heat inactivation studies of [REDACTED] were conducted [REDACTED] to demonstrate a minimum 6-log reduction in viability at commercial scale; commensurate with previously observed reductions at bench scale volumes. At the end of [REDACTED] fermentation run, the entire broth was heated to [REDACTED] and held for [REDACTED]. Samples were collected at [REDACTED] intervals, including the ramp up time required to achieve [REDACTED]

Loss of viability was observed with a >7-log reduction being achieved. Three separate runs were tested with each run showing the same loss of viability for (Fig.2).

A.

Strain	Cell Count (cells/mL)	Sample ID	Time (min) at <div></div>	Dilution	Volume Plated (mL)	cfu	cfu/mL or target	Log Reduction

B.

[illegible]

C.

Strain	Cell Count (cells/mL)	Sample ID	Time (min) at <div></div>	Dilution	Volume Plated (mL)	cfu	cfu/mL or target	Log Reduction

Figure 2. Viability of [REDACTED] heat treatment (A – C) Commercial scale fermentations of [REDACTED] were run [REDACTED]. Three separate runs, designated [REDACTED] were conducted for an n=3. The entire fermentation broth was heat treated [REDACTED] with samples collected at [REDACTED] intervals for the duration of the treatment, including ramp up and cool down times. A >7-log reduction in viability was observed for each run [REDACTED].